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Remarks

In the Official Action, the Examiner rejects Claims 1-3, 5-7, 9-11, 13-15, 17-20 and 23-24 under 35 U.S.C. §102 as allegedly being fully anticipated by U. S. Patent No. 5,345,105. These grounds for rejection are respectfully traversed.

Claim 1

The Examiner asserts that Sun discloses, "on Figure 6 of Sun a semiconducting device adapted to prevent and/or to thwart reverse engineering..." (See Page 2 of the Official Action.)

The Examiner asserts that "Sun et al. does not teach reverse engineering prevention...." (See Page 2, last paragraph, of the Official Action.)

What is the Examiner saying here? Either the Examiner is asserting that Sun, et al. does disclose a device adapted to prevent and/or thwart reverse engineering or does not disclose a device that prevents and/or thwarts reverse engineering. The Examiner is not entitled to take one position in one part of the Official Action, and then a completely different position in the second part of the Official Action.

Moreover, if the Examiner does believe that Sun discloses "a semiconducting device adapted to, prevent and/or thwart reverse engineering" as asserted on Page 2 of the Official Action, it is

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noted, with all due respect to the Examiner, that Sun does not appear to use "reverse" or "engineering" at any place in the disclosure. As such, on what possible basis is the Examiner making the assertion noted above?

The assertion made by the Examiner is undoubtedly a factual assertion. As such, the Examiner's requested to put the assertions into affidavit format as specifically required by the Rules of Practice. Please see 37 C.F.R. §1.104(2)(d). Compliance is respectfully requested.

On the issue of the weight to be given to the terms "adapted", the Examiner cites *In re Hutchinson*, 69 USPQ 138, without even paying the applicant the courtesy of noting that the Examiner is relying on mere dicta.

The Examiner's attention is directed to the MPEP, which does address "adapted to" terminology in §2106 and §2111.04. Note is made of the fact that the MPEP does not cite *In re Hutchinson*, which makes it clear that the Commissioner does not put much credence in the dicta set forth in *Hutchinson*. Why then is the Examiner relying on the dicta? Note also the language of the MPEP where the use of that language only may "raise a question" as to the limiting effect of the language. The MPEP does not sanction that which the Examiner is doing in this Application where the Examiner is ignoring the "adapted to" terminology almost seemingly out of hand.

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The Examiner states that the "adapted to" language "only requires the ability to so perform". Is the Examiner saying that with respect to Applicants' disclosure or to the prior art? Or is the Examiner is trying to state that only the Applicants' disclosure needs to have the "ability to so perform" and the prior art does not require "the ability to so perform"? If so, then the Examiner is basically asserting that the prior art does not need to meet each and every limitation of the claim even though the Examiner sets forth the rejection under 35 U.S.C. §102(b). That is obviously improper.

On the other side of the coin, if the prior art needs to possess "the ability to so perform", to use the language of the Examiner, then how does Sun possibly possess the ability to "prevent and/or thwart reverse engineering", particularly when Sun does not teach reverse engineering prevention as admitted by the Examiner in the Official Action?

Next, the Applicants assert that the "contact region" limitation of Claim 1 is not met by Sun. The Examiner responds by telling the Applicants that the term "contact region" is a broad limitation and the Examiner seems to indicate that the Examiner can read it on whatever structures he wants to in Sun. With all due respect to the Examiner, the Applicants believe that this is not the state of the law. First, it is submitted that the Examiner's assertions with respect to what is a contact region in Sun flies in the face of how the term contact is defined in this art.

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Enclosed is a page from "Fundamentals of Semiconductor Processing & Technology" by Badih El-Kareh published in 1995 by Kluwer Academic Publishers. Note that contacts are defined by openings, which are etched in the isolation shown on Figure 8.15 of El-Kareh. Note the similarity in the shape of the isolations in Figure 8.15 of El-Kareh and in Figure 6 of Sun, et al. Does the Examiner see any openings in the isolation layer of Figure 6 in Sun, et al. in the region that the Examiner defines as being the "contact region"?

What the Examiner defines as "a contact region" is, in fact, a region having zero contacts. While the term "contact region" might be a broad limitation, as the Examiner asserts, it is submitted that it cannot read on something which has no contact, and that is the something which the Examiner has done in examining this Application. That is improper!

It is submitted that there is one, and only reason, that the Examiner characterizes the left-hand side of Figure 6 of Sun as being a contact region, that is the desire to reject the claims in this Application on a nonsense piece of prior art by basically ignoring the limitation in its entirety. That is, with all due respect to the Examiner, highly improper.

Claim 1 also recites "a metal plug contact" which the Examiner asserts is anticipated by a "conductive layer between metal 16 and field oxide....". The Examiner is making the

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assumption that the layer immediately above semiconductor substrate 12 on the left hand side of Figure 6 is field oxide. First, it is to be noted that the Examiner's assumption that the shape, shown on the left hand side of Figure 6, appears to be field oxide is not based upon any teaching in Sun, but on the information the Examiner apparently knows from prior art. Does the Examiner see the words "field oxide" anywhere in Sun? The point of this observation is that the Examiner's rejection is really not proper under 35 U.S.C. §102, since the Examiner is really saying that it would be obvious to make the layer above the substrate on the left hand side of Figure 1 out of field oxide, meaning that the Examiner is really making an obviousness rejection under 35 U.S.C. §103 as opposed to an anticipation rejection under 35 U.S.C. §102.

Well, if the Examiner wants to make a 35 U.S.C. §103 rejection, the Examiner can do that, but only after withdrawing the finality of this rejection and entering a new non-final rejection on that basis. Of course, then the Examiner would also have to explain the motivation for making the modifications, which the Examiner would then be making to the Sun disclosure, and the Applicants would be permitted to inquire about where these motivations come from the prior art.

Of more import are the two unlabeled cross-hatched boxes shown above the layer, which the Examiner characterizes as being field oxide and immediately below layer 16. The Examiner characterizes those two boxes as "metal plug contact" in making the rejection.

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However, in Sun's disclosure, those and the other unnumbered layers are characterized much differently. Please see the Paragraph beginning at the top of Column 3 of Sun wherein Sun teaches the reader that the "unmarked layers lie adjacent or under dielectric layer 14 and illustrate the fact that dielectric layer 14 could be physically removed or in contact with substrate 12. The unmarked layers are not labelled due to the fact that the unmarked layers are not required in order to understand the invention to disclose herein." It is submitted that the sum and substance of that disclosure is that those unmarked layers are utterly unimportant to Sun's teaching and can basically be ignored. They appear to be randomly positioned in Sun with no rhyme or reason. The simple reason for that is randomness that they are depicted for one and only one purpose and that is to illustrate the fact that "dielectric layer 14 could be physically removed or in contact with substrate 12". That is the sole purpose of their depiction.

However, when the Examiner reads Sun, he sees a metal plug in the unmarked cross-hatched boxes of Figure 6 in these layers. Why is that so? Could it be because the Examiner has had the privilege of reading Applicants' disclosure and now understands why it might be important to dispose a metal plug on top of field oxide?

Furthermore, where does Sun teach that those two layers are metal?

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Again, the Examiner ignores that which Sun teaches, but tries to read Sun on Applicants' claims without giving due regard that which Sun really teaches. This Examiner is trying to bend Sun's disclosure, much like a nose of wax, for the sole purpose of anticipating Applicants' claims without giving due regard to that which Sun really teaches.

What the Examiner is also doing is converting Sun from a 35 U.S.C. §102 to a 35 U.S.C. §103 piece of prior art without bothering to cite what additional art he is relying upon to modify Sun, nor explaining where the motivation for making the modifications come from. That is improper. Additionally, if the two unmarked boxes shown above the layer, which the Examiner characterizes as being the field oxide on the left hand side of Figure 6 of Sun, can be metal layers, then where is the motivation for turning those two layers into metal layers coming from? With all due respect, it is suggested that there one, and only one, place that the Examiner is getting that motivation, and that motivation is coming straight out of Applicants' own disclosure. The Examiner is, in fact, using Applicants' own disclosure against Applicants, and that is unfair.

Claim 1 is not anticipated by Sun and the Examiner's rejection of Claim 1, and the Claims which depend thereon, based upon Sun, is wholly improper.

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Claim 9

The Examiner's rejection of Claim 9, based upon Sun, is filled with as many holes as the Examiner's rejection of Claim 1.

When examining Claim 1, the left hand side of Figure 6 of Sun is characterized as being the contact region. Now, when we come to Claim 9, all of sudden the right hand side of Figure 6 of Sun becomes a contact region. It is just amazing how Sun seems to metamorphise as the Examiner attempts to read Applicants' claims upon it. Just exactly where are the contact regions in Sun? Or is the substrate one big huge contact region? Where does the Examiner see anything like the contacts described by El-Karch in Sun?

Why is uncrossed hatch region immediately on substrate 12 on the left hand side of Figure 6 characterized as "field oxide" and the two crossed hatched boxes immediately above the field oxide characterized as being "a metal plug contact" by the Examiner? What possibly makes those two layers "conductive" as asserted by the Examiner in the Official Action?

The Examiner is reading more into Sun than Sun discloses. If the Examiner wants to do that, then the Examiner can try to convert this rejection under 35 U.S.C. §102 to a rejection under 35



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U.S.C. §103, but the Examiner has to comply with the Rules of Practice. Where is there any disclosure whatsoever that the two cross hatched boxes on the left hand side of Figure 6 of Sun are either "metal" or "conductive" as asserted by the Examiner?

The Applicants' comments with respect to the "adapted to" terminology in Claim 1 also applies equally well to Claim 9.

The rejection of Claim 9 is improper and should be withdrawn.

#### Claim 5

The Examiner rejects Claim 5 without bothering to explain, in any detail, why Claim 5 is being rejected other than to refer the Applicants' attention to the rejection of Claim 1, which is a device claim, while Claim 5 is a method claim.

Claim 5 recites a method of preventing and/or thwarting reverse engineering. The Examiner agrees, in the rejection of Claim 1, that Sun does not teach reverse engineering prevention. If that is the case, then why is Claim 5 allegedly anticipated?

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Claim 5 recites, "providing a field oxide layer". The Examiner apparently reads that on the uncrossed hatched layer immediately above layer 12 shown in Figure 6 of Sun. Is not this really an obviousness type rejection as oppose to an anticipation rejection?

Claim 5 also recites, "providing a metal plug contact disposed within said contact region and above said field oxide layer..." The Examiner apparently reads that upon the two cross-hatched boxes shown on the left hand side of Figure 6 between the layer that the Examiner characterizes as being field oxide and layer 16. Where does Sun teach that those layers are metal? As noted above, Sun thinks that those layers are so unimportant that they are not even worth numbering and are apparently randomly drawn merely to demonstrate the fact that Sun's dielectric layer "can be physically removed or in contact with the substrate 12" as specifically taught by Sun.

Why is the region, which is covered by the layer of which the Examiner characterizes as being field oxide in Figure 6 of Sun, characterized as being a "contact region" by the Examiner? Where are the contacts such as those taught by El-Kareh?

It is submitted, with all due respect to the Examiner, that the only reason that the Examiner characterizes the left hand side of Figure 6 of Sun as being the contact region and characterizes the two crossed-hatched boxes as being a metal contact is to reject Claim 5. However, the

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Examiner finds that teaching only in Applicants' own disclosure and then uses it against Applicants in citing Sun since obviously Sun is devoid of any such teaching.

#### Claim 13

Claim 13 is also method claim.

As asked above with respect to Claim 5, how does Sun anticipate a method for preventing and/or thwarting reverse engineering when the Examiner seemingly agrees that Sun teaches no such thing? On what basis does the Examiner assert that the layer, immediately above layer 12 on the left hand side of Figure 6, is a field oxide layer as recited in Claim 13? If Sun is silent as to just what that layer comprises, then the Examiner's characterization of it as being field oxide means that the Examiner is going outside Sun's disclosure to make that assertion. As indicated above, the Examiner's requested to make all factual assertions in affidavit format as specifically required by the Rules of Practice. Please see 37 C.F.R. §1.104(d)(2).

Furthermore, how do the two crossed hatched boxes shown immediately above the layer, which the Examiner characterized as being field oxide and below layer 16, become a metal plug contact for the purpose of rejecting Claim 13? Where is that disclosed in Sun?

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Since Sun does not meet each and every limitation of Claim 13, the rejection under 35 U.S.C. 102 is clearly improper.

#### Summary

Sun is not a viable reference for the Examiner to use in the context of a 35 U.S.C. §102 rejection. Before Applicants exercise their right to appeal the Examiner's Final Action, the Examiner is respectfully requested to withdraw the finality of the Action, to comply with the Rules of Practice, to supply supporting affidavits to each and every factual assertion made in support of the rejections of claims pending in this Application, to otherwise correct the deficiencies noted in this Response, and to allow Applicants claims as filed.

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Respectfully submitted,

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